

# Work Order ID 51254

August 13, 2009 6:55:39 AM



Page 1

Item ID:	D3405-041	Accept		Setup	Start	
Revision ID:	B				Stop	
Item Name:	Lug Assembly					
Start Date:	08/13/2009	Start Qty:	12.00		Cust Item ID:	
Required Date:	08/28/2009	Req'd Qty:	12.00		Customer:	
Reference:						

Approvals:	Process Plan:	<u>MF</u>	Date:	<u>09-08-13</u>	Tooling:		Date:		Run	Start	
	QC:		Date:		SPC (Y/N):		Date:			Stop	

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	----------------	--------------	--------------	---------------	---------------	------------------	----------------

Draw Nbr	Revision Nbr
D3405	Rev B

100	FLOW WATER JET	0.00							
	Waterjet								
FLOW CNC Waterjet	Memo	0.00							
	1-Cut as per Dwg D3405 <input type="checkbox"/> Dwg Rev: <u>B</u> <input type="checkbox"/> Prog Rev: <u>B</u> <input type="checkbox"/> 2- Deburr if necessary								

B 9-8-17

110	QC2- Inspect parts off machine FAI/FAIB	0.00							
	QC								
Quality Control	Memo	0.00							

B 9-8-17

120	QC8- Inspect parts - second check	0.00							
	QC								
Quality Control	Memo	0.00							

=> 502/08/17

(12) /

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



**Work Order ID 51254**




August 13, 2009 6:55:39 AM



Page 2

Item ID: D3405-041 Accept  Setup Start   
Revision ID: B Stop   
Item Name: Lug Assembly  
Start Date: 08/13/2009 Start Qty: 12.00  Cust Item ID:  
Required Date: 08/28/2009 Req'd Qty: 12.00  Customer:  
Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_ Run Start   
QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_ Stop 

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130  Brake NC Brake NC	NC BRAKE  Memo Deburr Form using DT8204 as per Dwg D3405	0.00 0.00	SB 02/08/20			12	<del>0</del>		
140  QC Quality Control	QC5- Inspect part completeness to step on W/O  Memo	0.00 0.00	=> 502/08/20			(x12)	<del>0</del>		
150  Large Fab Large Fab	Large Fab  Memo Weld as per Dwg D3405 Identify as D3405-041	0.00 0.00	EL 9-8-21			(x12)			

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Work Order ID 51254

August 13, 2009 6:55:39 AM



Page 3

Item ID: D3405-041

Accept



Setup Start



Revision ID: B

Stop



Item Name: Lug Assembly

Start Date: 08/13/2009 Start Qty: 12.00



Cust Item ID:

Required Date: 08/28/2009 Req'd Qty: 12.00



Customer:

Reference:

Run Start



Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Stop



QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Draw  
Number

Draw  
Rev.

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

160

QC9- Inspect visual per QSI004- Fusion Welds

0.00

*CPC 09-08-24*



QC

Memo

0.00

Quality Control

170

QC5- Inspect part completeness to step on W/O

0.00

*=> S 02/08/24*



QC

Memo

0.00

*(K12)*

*φ*

Quality Control

180

White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum

0.00



Powdercoat

Memo

0.00

*M112260*

*=> M 09/08/24*

*112*

*φ*

Powder Coating

START TIME: *1:30pm* ☐ OVEN TEMPERATURE:  
*2:00pm* ☐ FINISH TIME: *4:00pm*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



# Picklist Print

August 13, 2009 6:55:38 AM

Page 1

Work Order ID: 51254



Parent Item: D3405-041RevB



Parent Item Name: Lug Assembly

Start Date: 08/13/2009

Required Date: 08/28/2009

Comments:

Start Qty: 12.00

Required Qty: 12.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
D3404-1RevC		Manufactured	No			100	Each	8.0000	12.0000			

GHW Lug



Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

ST

50252

812

EL 9-8-22

45372

8

M304S11GA

Purchased

No

150

sf

79.0709

1.9453



304/316 0.125 Sheet

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

MAT

79.07090316

111018

79.0709032

111018 HB 9-8-17

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

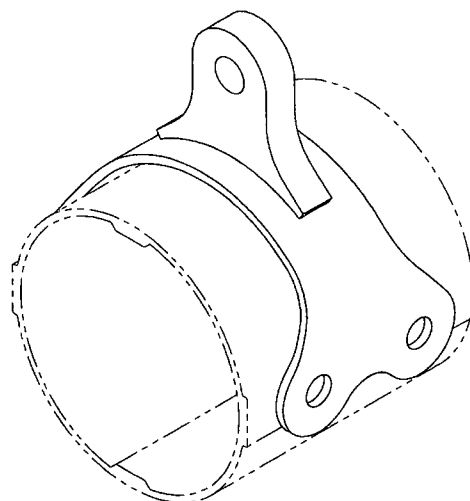
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

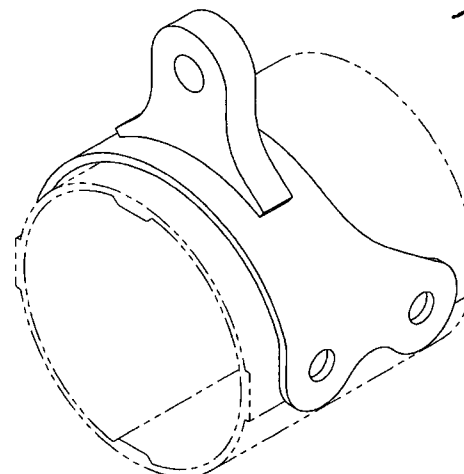
ITEM No.	QTY. -041	QTY. -043	PART NUMBER	DESCRIPTION
1	X		D3405-041	LUG ASSEMBLY
2		X	D3405-043	LUG ASSEMBLY
11	1	1	D3404-1	GHW LUG
12	1		D3405-1	GHW BRACKET
13		1	D3405-3	GHW BRACKET

△B

SHOP COPY  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
NO. 51254  
mf 09-0813



**D3405-041 LUG ASSEMBLY**  
(SKID TUBE SECTION SHOWN  
FOR REF ONLY)



**D3405-043 LUG ASSEMBLY**  
(SKID TUBE SECTION SHOWN  
FOR REF ONLY)

**RELEASED**  
08/12/18

**NOTES:**

- 1) MATERIAL: N/A
- 2) FINISH: POWDER COAT ASSEMBLY WHITE (4.3.5.2) PER DART QSI 005 4.3
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D3405-041" USING FINE POINT PERMANENT INK MARKER  
: IDENTIFY WITH DART P/N "D3405-043" USING FINE POINT PERMANENT INK MARKER
- 7) WEIGHT: -041, 0.85 lbs  
-043, 0.87 lbs

B	DRAWING REDRAWN IN SOLIDWORKS WITH CURRENT STANDARDS AND TRANSFERRED TO "B" SIZE BORDER. FLAT PATTERNS FOR -1 & -3 INCREASED IN LENGTH TO PREVENT FOULING AT INSTL (SEE PAR198). SHEETS 3 & 4 ZONE A6 4.120 DIM WAS 4.100.	AJS	08.09.19
A	NEW ISSUE	PH	05.03.08
REV.	DESCRIPTION	BY	DATE
DESIGN	PH	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA DRAFTING NO. <b>D3405</b> REV. B SHEET 1 OF 4 TITLE <b>GHW LUG ASSEMBLY</b> SCALE NTS DATE <b>08.09.19</b>	
DRAWN	AJS		
CHECKED			
MFG. APPR.			
APPROVED			
DE APPR.			
<small>COPYRIGHT © 2005 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD</small>			

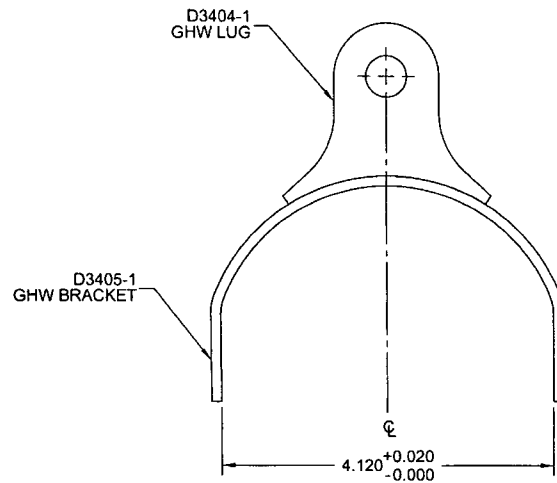
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

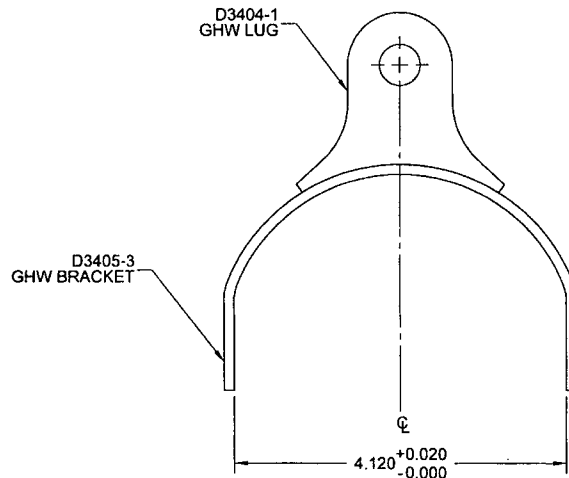
Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

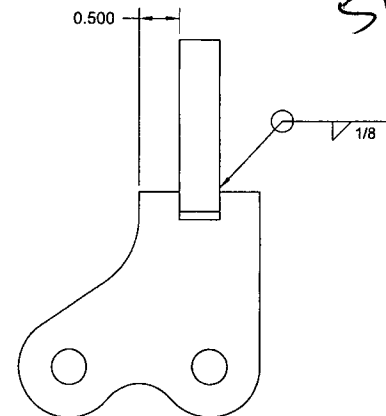
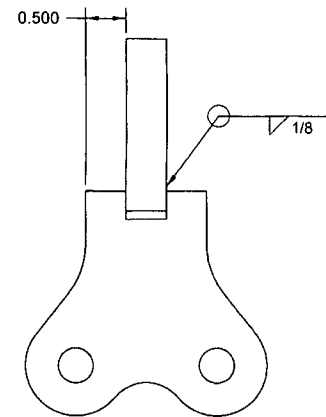
**NOTE:** Date & initial all entries



**D3405-041 LUG ASSEMBLY**



**D3405-043 LUG ASSEMBLY**



51254

**RELEASED**  
6/12/18 MP

DESIGN	PH	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
DRAWN	AJS		
CHECKED		DRAWING NO.	REV. B
MFG. APPR.		D3405	SHEET 2 OF 4
APPROVED		TITLE	SCALE
DE APPR.		GHW LUG ASSEMBLY	NTS
DATE	08.09.19	COPYRIGHT © 2005 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

**Dart Aerospace Ltd**

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

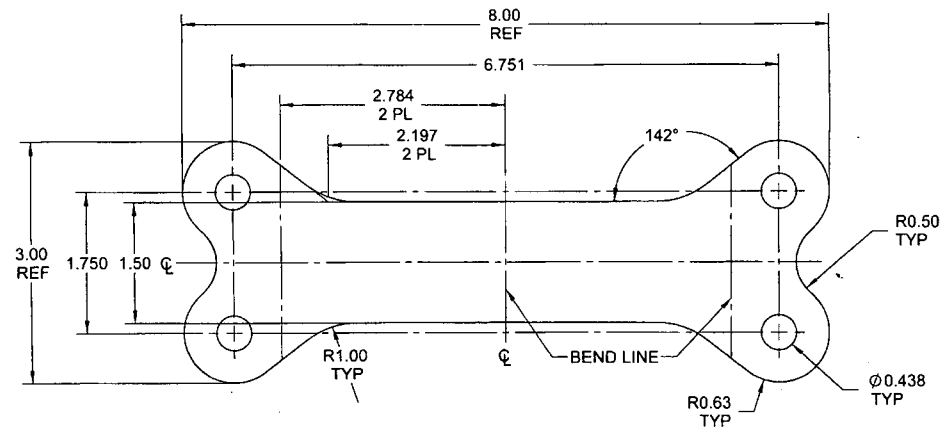
Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

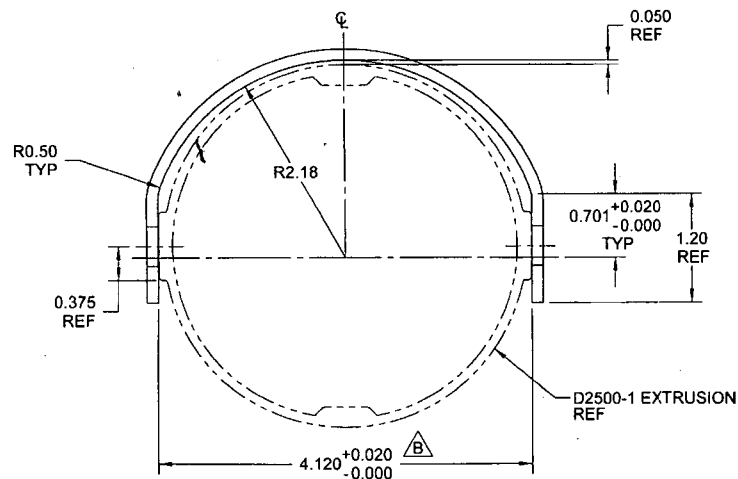
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

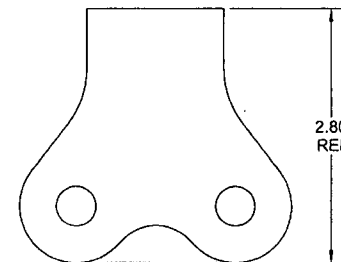




**D3405-1F GHW BRACKET FLAT PATTERN**



**D3405-1 GHW BRACKET**  
(MAKE FROM D3405-1F)



SIDE VIEW FOR REF ONLY

- NOTES:
- 1) MATERIAL: AISI 304/316 STAINLESS STEEL SHEET, 11 GAUGE (0.125 THICK)  
PER MIL-S-5059 (ANNEALED) 2B FINISH OR AMS 5513/5524  
REF. DART SPEC. M304S11GA
  - 2) FINISH: N/A
  - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
  - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
  - 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
  - 6) IDENTIFICATION: N/A
  - 7) WEIGHT: N/A

DESIGN	PH	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
DRAWN	AJS		
CHECKED		DRAWING NO.	REV. B
MFG. APPR.		D3405	SHEET 3 OF 4
APPROVED		TITLE	SCALE
DE APPR.		GHW LUG ASSEMBLY	NTS
DATE	08.09.19	COPYRIGHT © 2005 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD	

51254

RELEASED  
07/08/12

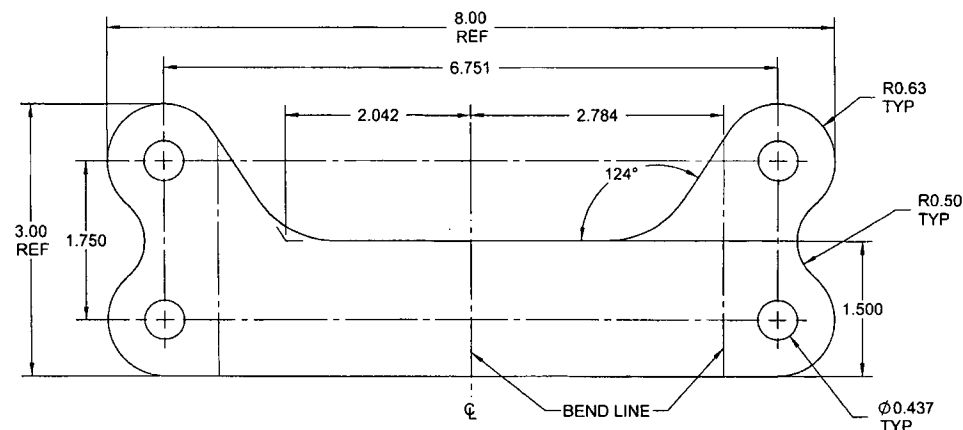
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

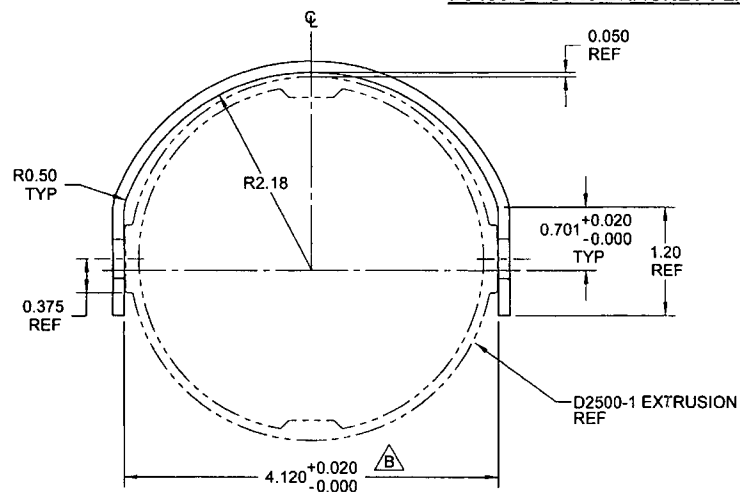
Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

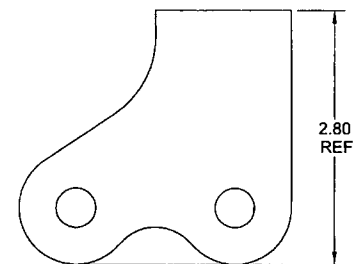
**NOTE:** Date & initial all entries



**D3405-3F GHW BRACKET FLAT PATTERN**



**D3405-3 GHW BRACKET**  
(MAKE FROM D3405-3F)



SIDE VIEW FOR REF ONLY

**NOTES:**

- 1) MATERIAL: AISI 304/316 STAINLESS STEEL SHEET, 11 GAUGE (0.125 THICK)  
PER MIL-S-5059 (ANNEALED) 2B FINISH OR AMS 5513/5524  
REF. DART SPEC. M304S11GA
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: N/A

DESIGN	PH	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
DRAWN	AJS		
CHECKED		DRAWING NO.	REV. B
MFG. APPR.		D3405	SHEET 4 OF 4
APPROVED		TITLE	SCALE
DE APPR.		GHW LUG ASSEMBLY	NTS
DATE	08.09.19	COPYRIGHT © 2005 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

**RELEASED**  
06/12/18 NV

51254

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries